

## Metallized Polypropylene Film Capacitor

Series : **ECWH(A)**

Non-inductive construction using metallized polypropylene film with flame retardant epoxy resin coating



### Features

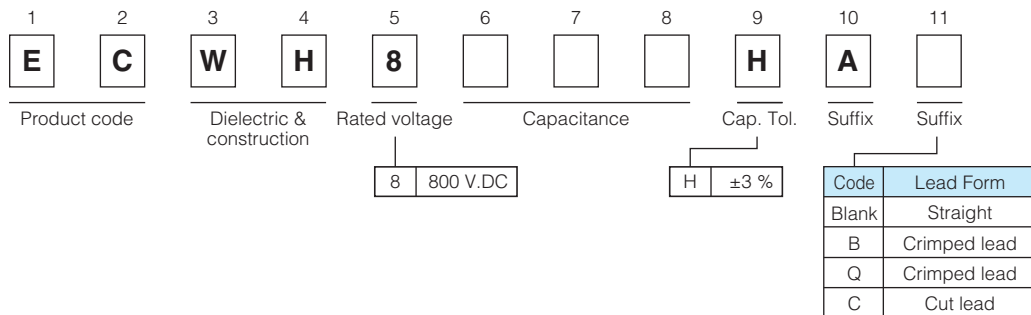
- Small size
- Excellent electrical characteristics
- Low loss
- Low Hum Sound Noise
- Flame retardant epoxy resin coating
- RoHS directive compliant

### Recommended applications

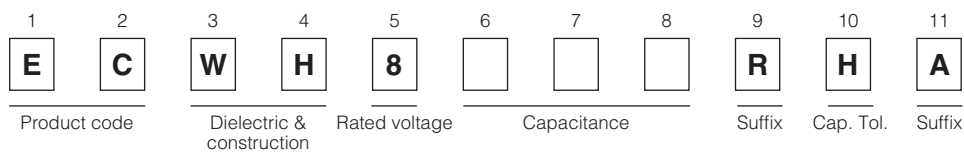
- General resonance circuit

### Explanation of part number

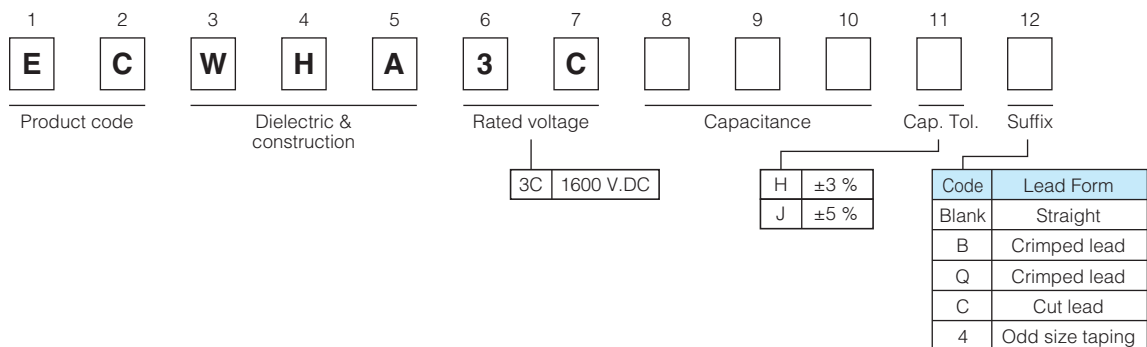
- Rated voltage 800 V.DC (Bulk)



- Rated voltage 800 V.DC (Odd size taping)



- Rated voltage 1600 V.DC

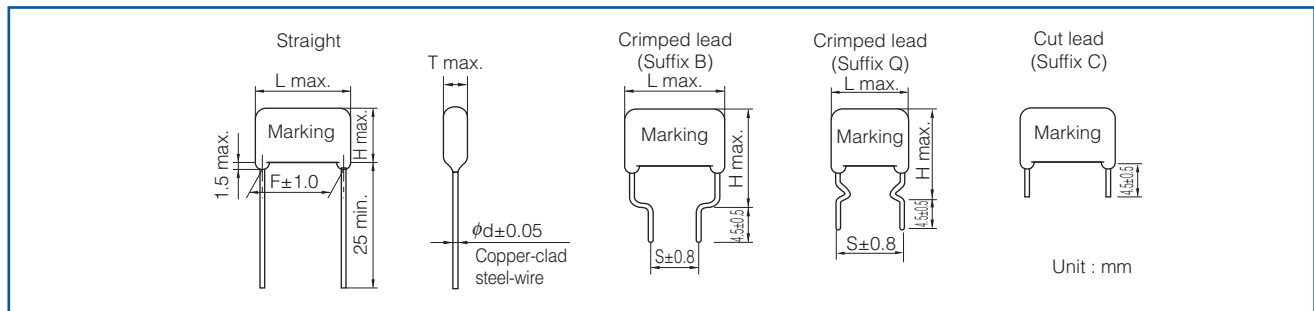


## Specifications

|  |  |                       |
|--|--|-----------------------|
| Category temp. range<br>(Including temperature-rise on unit surface) | - 40 °C to +105 °C                                   |                       |
| Rated voltage  | 800 V.DC   | 1600 V.DC             |
| Capacitance range  | 0.010 μF to 0.047 μF                                 | 0.0010 μF to 0.047 μF |
| Capacitance tolerance  | ±3 % (H)   | ±3 % (H), ±5 % (J)    |
| Dissipation factor (tan δ)   | tan δ ≤ 0.1 % ( 20 °C, 1 kHz )                       |                       |
| Withstand voltage  | Between terminals : Rated volt. (V.DC) × 150 %, 60 s |                       |
| Insulation resistance (IR)   | IR ≥ 30000 MΩ ( 20 °C, 500 V.DC, 60 s )              |                       |

\* In case of applying voltage in alternating current (50 Hz or 60 Hz sine wave) to a capacitor with DC rated voltage, please refer to the page of "Permissible voltage (R.M.S) in alternating current corresponding to DC rated voltage".

## Dimensions

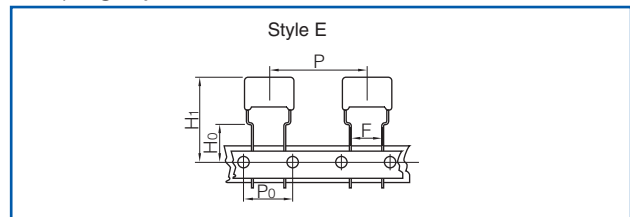


## Packaging specifications for bulk package

- Packing quantity : 100 pcs./bag

## Taping specifications for automatic insertion

- Taping style



\* Refer to the page of taping specifications.

- Taping style

| Series  | Rated voltage<br>(V.DC) | Capacitance range<br>(μF) | Taping style |    |   |   |   | Packing | suffix |       |
|---------|-------------------------|---------------------------|--------------|----|---|---|---|---------|--------|-------|
|         |                         |                           | AD           | AS | B | C | D |         |        | E     |
| ECWH(A) | 800                     | 0.010 to 0.047            |              |    |   |   |   | ○       | Ammo   | RHA   |
|         | 1600                    | 0.0010 to 0.047           |              |    |   |   |   | ○       |        | ( ) 4 |

- Lead spacing

| Style | Lead spacing |
|-------|--------------|
| E     | 7.5 mm       |

## Rating · Dimensions · Quantity

- Rated voltage : 800 V.DC, Capacitance tolerance : ±3 % (H)

| Part No.      | Cap.<br>(μF) | Dimensions (mm) |        |          |                            |                            |      |                            |                            |     | Min. order Q'ty |                            |
|---------------|--------------|-----------------|--------|----------|----------------------------|----------------------------|------|----------------------------|----------------------------|-----|-----------------|----------------------------|
|               |              | L max.          | T max. | H max.   |                            |                            | F    | S                          |                            | φd  | Taping          | Bulk                       |
|               |              |                 |        | Straight | Crimped lead<br>(Suffix B) | Crimped lead<br>(Suffix Q) |      | Crimped lead<br>(Suffix B) | Crimped lead<br>(Suffix Q) |     | 7.5 mm          | Straight ·<br>Crimped lead |
| ECWH8103HA( ) | 0.010        | 15.4            | 5.4    | 9.8      | 14.8                       | 14.8                       | 12.5 | 7.5                        | 12.5                       | 0.6 | 500             |                            |
| ECWH8123HA( ) | 0.012        | 15.4            | 5.8    | 10.2     | 15.2                       | 15.2                       | 12.5 | 7.5                        | 12.5                       | 0.6 |                 |                            |
| ECWH8153HA( ) | 0.015        | 15.4            | 6.2    | 10.6     | 15.6                       | 15.6                       | 12.5 | 7.5                        | 12.5                       | 0.6 |                 |                            |
| ECWH8183HA( ) | 0.018        | 15.7            | 6.6    | 11.0     | 16.0                       | 18.0                       | 12.5 | 7.5                        | 12.5                       | 0.8 |                 |                            |
| ECWH8223HA( ) | 0.022        | 15.7            | 7.1    | 11.5     | 16.5                       | 18.5                       | 12.5 | 7.5                        | 12.5                       | 0.8 |                 |                            |
| ECWH8273HA( ) | 0.027        | 15.7            | 7.6    | 12.0     | 17.0                       | 19.0                       | 12.5 | 7.5                        | 12.5                       | 0.8 | 400             | 500                        |
| ECWH8333HA( ) | 0.033        | 15.7            | 8.4    | 12.8     | 17.8                       | 19.8                       | 12.5 | 7.5                        | 12.5                       | 0.8 |                 |                            |
| ECWH8393HA( ) | 0.039        | 15.7            | 8.9    | 13.3     | 18.3                       | 20.3                       | 12.5 | 7.5                        | 12.5                       | 0.8 |                 |                            |
| ECWH8473HA( ) | 0.047        | 15.7            | 9.7    | 14.1     | 19.1                       | 21.1                       | 12.5 | 7.5                        | 12.5                       | 0.8 | 300             |                            |

\* H : Capacitance tolerance code  
( ) : Suffix for lead crimped taped type

## Rating · Dimensions · Quantity

● Rated voltage : 1600 V.DC, Capacitance tolerance : ±3 %(H), ±5 %(J)

| Part No.       | Cap.<br>(μF) | Dimensions (mm) |        |          |                            |                            |      |                            |                            |     | Min. order Q'ty |          |              |
|----------------|--------------|-----------------|--------|----------|----------------------------|----------------------------|------|----------------------------|----------------------------|-----|-----------------|----------|--------------|
|                |              | L max.          | T max. | H max.   |                            |                            | F    | S                          |                            | φd  | Taping          |          | Bulk         |
|                |              |                 |        | Straight | Crimped lead<br>(Suffix B) | Crimped lead<br>(Suffix Q) |      | Crimped lead<br>(Suffix B) | Crimped lead<br>(Suffix Q) |     | 7.5 mm          | Straight | Crimped lead |
| ECWHA3C102□( ) | 0.0010       | 17.8            | 5.2    |          | 13.0                       | 13.0                       |      | 10.0                       | 15.0                       | 0.6 | 600             |          |              |
| ECWHA3C112□( ) | 0.0011       | 17.8            | 5.4    |          | 13.1                       | 13.1                       |      | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C122□( ) | 0.0012       | 17.8            | 5.5    |          | 13.2                       | 13.2                       |      | 10.0                       | 15.0                       | 0.6 | 500             |          |              |
| ECWHA3C132□( ) | 0.0013       | 17.8            | 5.7    |          | 13.4                       | 13.4                       |      | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C152□( ) | 0.0015       | 17.8            | 5.9    |          | 13.7                       | 13.7                       |      | 10.0                       | 15.0                       | 0.6 | 400             | -        |              |
| ECWHA3C162□( ) | 0.0016       | 17.8            | 6.1    |          | 13.9                       | 13.9                       |      | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C182□( ) | 0.0018       | 17.8            | 6.4    |          | 14.1                       | 14.1                       |      | 10.0                       | 15.0                       | 0.6 | 600             |          |              |
| ECWHA3C202□( ) | 0.0020       | 17.8            | 6.6    |          | 14.3                       | 14.3                       |      | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C222□( ) | 0.0022       | 17.8            | 6.7    | -        | 14.5                       | 14.5                       | -    | 10.0                       | 15.0                       | 0.6 | 500             |          |              |
| ECWHA3C242□( ) | 0.0024       | 17.8            | 7.0    |          | 14.7                       | 14.7                       |      | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C272□( ) | 0.0027       | 17.8            | 5.2    |          | 13.0                       | 13.0                       |      | 10.0                       | 15.0                       | 0.6 | 400             |          |              |
| ECWHA3C302□( ) | 0.0030       | 17.8            | 5.5    |          | 13.2                       | 13.2                       |      | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C332□( ) | 0.0033       | 17.8            | 5.6    |          | 13.4                       | 13.4                       |      | 10.0                       | 15.0                       | 0.6 | 500             |          |              |
| ECWHA3C362□( ) | 0.0036       | 17.8            | 5.7    |          | 13.5                       | 13.5                       |      | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C392□( ) | 0.0039       | 17.8            | 6.0    |          | 13.8                       | 13.8                       |      | 10.0                       | 15.0                       | 0.6 | 600             |          |              |
| ECWHA3C432□( ) | 0.0043       | 17.8            | 6.2    |          | 13.9                       | 13.9                       |      | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C472□( ) | 0.0047       | 17.8            | 6.4    | 9.1      | 14.1                       | 14.1                       | 15.0 | 10.0                       | 15.0                       | 0.6 | 400             |          |              |
| ECWHA3C512□( ) | 0.0051       | 17.8            | 6.6    | 9.4      | 14.4                       | 14.4                       | 15.0 | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C562□( ) | 0.0056       | 17.8            | 6.8    | 9.6      | 14.6                       | 14.6                       | 15.0 | 10.0                       | 15.0                       | 0.6 | 500             |          |              |
| ECWHA3C622□( ) | 0.0062       | 17.8            | 7.1    | 9.8      | 14.8                       | 14.8                       | 15.0 | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C682□( ) | 0.0068       | 17.8            | 6.1    | 12.1     | 17.1                       | 17.1                       | 15.0 | 10.0                       | 15.0                       | 0.6 | 400             | 1000     |              |
| ECWHA3C752□( ) | 0.0075       | 17.8            | 6.5    | 12.4     | 17.4                       | 17.4                       | 15.0 | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C822□( ) | 0.0082       | 17.8            | 6.8    | 12.7     | 17.7                       | 17.7                       | 15.0 | 10.0                       | 15.0                       | 0.6 | 500             |          |              |
| ECWHA3C912□( ) | 0.0091       | 17.8            | 7.1    | 13.0     | 18.0                       | 18.0                       | 15.0 | 10.0                       | 15.0                       | 0.6 |                 |          |              |
| ECWHA3C103□( ) | 0.010        | 20.3            | 6.4    | 12.3     | 17.3                       | 17.3                       | 17.5 | 10.0                       | 17.5                       | 0.6 | 400             |          |              |
| ECWHA3C113□( ) | 0.011        | 20.3            | 6.6    | 12.5     | 17.5                       | 17.5                       | 17.5 | 10.0                       | 17.5                       | 0.6 |                 |          |              |
| ECWHA3C123□( ) | 0.012        | 20.3            | 6.8    | 12.8     | 17.8                       | 17.8                       | 17.5 | 10.0                       | 17.5                       | 0.6 | 300             |          |              |
| ECWHA3C133□( ) | 0.013        | 20.3            | 7.1    | 13.0     | 18.0                       | 18.0                       | 17.5 | 10.0                       | 17.5                       | 0.6 |                 |          |              |
| ECWHA3C153□( ) | 0.015        | 20.3            | 7.6    | 13.5     | 18.5                       | 18.5                       | 17.5 | 10.0                       | 17.5                       | 0.6 | 800             |          |              |
| ECWHA3C163□( ) | 0.016        | 20.3            | 7.9    | 13.8     | 18.8                       | 18.8                       | 17.5 | 10.0                       | 17.5                       | 0.6 |                 |          |              |
| ECWHA3C183□( ) | 0.018        | 20.6            | 8.2    | 14.1     | 19.1                       | 21.1                       | 17.5 | 10.0                       | 17.5                       | 0.8 | 200             |          |              |
| ECWHA3C203□( ) | 0.020        | 20.6            | 8.7    | 14.6     | 19.6                       | 21.6                       | 17.5 | 10.0                       | 17.5                       | 0.8 |                 |          |              |
| ECWHA3C223□( ) | 0.022        | 20.6            | 9.1    | 15.0     | 20.0                       | 22.0                       | 17.5 | 10.0                       | 17.5                       | 0.8 | 600             |          |              |
| ECWHA3C243□( ) | 0.024        | 20.6            | 9.6    | 15.4     | 20.4                       | 22.4                       | 17.5 | 10.0                       | 17.5                       | 0.8 |                 |          |              |
| ECWHA3C273□( ) | 0.027        | 20.6            | 10.0   | 15.9     | 20.9                       | 22.9                       | 17.5 | 10.0                       | 17.5                       | 0.8 | 800             |          |              |
| ECWHA3C303□( ) | 0.030        | 20.6            | 10.7   | 16.5     | 21.5                       | 23.5                       | 17.5 | 10.0                       | 17.5                       | 0.8 |                 |          |              |
| ECWHA3C333□( ) | 0.033        | 20.6            | 11.2   | 17.0     | 22.0                       | 24.0                       | 17.5 | 10.0                       | 17.5                       | 0.8 | 200             |          |              |
| ECWHA3C363□( ) | 0.036        | 20.6            | 11.7   | 17.5     | 22.5                       | 24.5                       | 17.5 | 10.0                       | 17.5                       | 0.8 |                 |          |              |
| ECWHA3C393□( ) | 0.039        | 20.6            | 12.1   | 18.0     | 23.0                       | 25.0                       | 17.5 | 10.0                       | 17.5                       | 0.8 | 800             |          |              |
| ECWHA3C433□( ) | 0.043        | 20.6            | 12.8   | 18.6     | 23.6                       | 25.6                       | 17.5 | 10.0                       | 17.5                       | 0.8 |                 |          |              |
| ECWHA3C473□( ) | 0.047        | 20.6            | 13.4   | 19.2     | 24.2                       | 26.2                       | 17.5 | 10.0                       | 17.5                       | 0.8 | 600             |          | 800          |

\* □ : Capacitance tolerance code  
( ) : Suffix for lead crimped taped type